# 510(k) Summary

## ArthroCare® Corporation

### Q-Fix™ Suture Anchor System

This summary of 510(k) safety and effectiveness information is being submitted in accordance with the requirements of SMDA 1990 and 21 CFR 807.92.

SEP 19 2013

**General Information**

| | |
|---|---|
| Submitter Name: | ArthroCare Corporation |
| Address | 7000 West William Cannon Drive<br>Austin, TX 78735 |
| Contact Person: | Laura Kasperowicz<br>Sr. Manager, Regulatory Affairs<br>Phone: 949-585-2406<br>Fax: 949-585-2401 |
| Date Prepared: | August 9, 2013 |

**Device Name**

| | |
|---|---|
| Proprietary Name: | Q-Fix™ Suture Anchor System |
| Common Name: | Bone Anchor |
| Classification Name: | Smooth or threaded metallic bone fixation fastener |
| Device Class: | Class II |
| Product Code: | MBI |
| CFR Section: | 21 CFR 888.3040 |

**Predicate Device**

Eleven Blade Q-Fix™ Suture Anchor: K122336 (cleared January 9, 2013)

**Description**

The Q-Fix Suture Anchor System (Q-Fix) is a bone anchor with inserter handle designed for use in arthroscopic and orthopedic procedures.

The Q-Fix consists of two primary parts: a bone anchor and an anchor inserter, which is preloaded with the anchor. The anchor inserter is a disposable tool.

The entire product is packaged in a tray with a Tyvek® lid, and the finished product is sterilized by ethylene oxide. Both the anchor and inserter are designed for single use only.

The Q-Fix Suture Anchor System consists of the bone anchor and associated instruments for implanting the bone anchor. In accordance with the ArthroCare Product Development Process, testing

was performed to demonstrate the proposed device is substantially equivalent to the predicate device. Mechanical testing was performed in accordance with the requirements of the FDA Guidance Document, *Testing Bone Anchor Devices*, April 1996.

**Intended Use/Indications For Use**

The Q-Fix Suture Anchor is intended to be used for soft tissue to bone fixation for:

| | |
|---|---|
| **Shoulder:** | Bankart lesion repair; SLAP lesion repair; acromio-clavicular repair; capsular shift/capsulolabral reconstruction; deltoid repair; rotator cuff tear repair; biceps tenodesis |
| **Foot & Ankle:** | Medial/Lateral repair and reconstruction; midfoot and forefoot repair; Hallux valgus reconstruction; Metatarsal ligament/tendon repair or reconstruction; Achilles tendon repair |
| **Elbow:** | Ulnar or radial collateral ligament reconstruction; lateral epicondylitis repair; biceps tendon reattachment |
| **Knee:** | Extra-capsular repair: medial collateral ligament (MCL), lateral collateral ligament (LCL) and posterior oblique ligament; Iliotibial band tenodesis (IBT); patellar tendon repair; vastus medialis obliquus advancement (VMO); joint capsule closure |
| **Hand & Wrist:** | Collateral ligament repair; Scapholunate ligament reconstruction; Tendon transfers in phalanx; Volar plate reconstruction |
| **Hip:** | Acetabular labral repair |

**Non-Clinical Data**

Bench testing was performed on both the proposed and predicate devices in accordance with the FDA Guidance Document, *Testing Bone Anchors*, April 1996. This *in vitro* testing involved insertion of the anchors into a simulated human bone substrate followed by both static and cyclic fatigue testing.

The test results demonstrate that the Q-Fix meets its design, performance, and safety specifications. Based on the test results, the proposed device performs as intended and mechanical properties are substantially equivalent to the predicate devices when used in accordance with labeling.

**Clinical Data**

No clinical or animal data are included in this submission.

**Summary**

All testing demonstrates that the Q-Fix performs as intended and has acceptable mechanical properties when used in accordance with its labeling.

As the intended use, operating principle, materials and technological characteristics are comparable to the predicate device, the Q-Fix Suture Anchor System is substantially equivalent. The minor differences between the Q-Fix and predicate device do not raise any new questions of safety or effectiveness.

ArthroCare®

| Comparison of Technological Characteristics | | |
|---|---|---|
| **Characteristics** | **Predicate Device**<br>**Eleven Blade Q-Fix**<br>**(K122336)** | **Proposed Device**<br>**ArthroCare Q-Fix** |
| Intended Use | Fixation of soft tissue to bone | Same |
| Delivery Method | Arthroscopic and Limited Access | Same |
| How Supplied | Packaged in pouch, Sterile (EtO), Single Use | Packaged in thermoform tray with Tyvek lid, Sterile (EtO), Single Use |
| Suture Material | No. 2 UHMWPE Suture | Same |
| Anchor Material | Braided Polyester | Same |
| Inserter Handle Materials | Medical Grade Plastics and<br>Surgical Grade Stainless Steels | Same |
| Method of Anchor Insertion | Inserted into a predrilled hole | Same |
| Bone Locking Mechanism | Expandable Compression Fit | Same |
| Suture Locking Mechanism | Manually tied suture knot | Same |
| # of Suture Legs | Two (1.8mm) & Four (2.8mm) | Same |
| Sizes Offered | 1.8mm & 2.8mm | Same |
| Deployed Length | 15mm for 1.8mm anchor<br>20mm for 2.8mm anchor | Same |
| Bone hole size | 2.1mm (0.083") for 1.8mm anchor<br>3.1mm (0.121") for 2.8mm anchor | 2.2mm (0.085") for 1.8mm anchor<br>3.1mm (0.123") for 2.8mm anchor |
| Accessory Instruments | Drill, Drill Guide, Obturator, | Same<br>Bone Punch, Knot Pusher,<br>FirstPass® Suture Punch |

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
10903 New Hampshire Avenue
Document Control Center – WO66-G609
Silver Spring, MD 20993-0002

September 19, 2013

ArthroCare Corporation
Mr. Mitchell Dhority
Vice President, Regulatory Affairs
7000 West William Cannon Drive
Austin, Texas 78735

Re: K132513
Trade/Device Name: Q-Fix™ Suture Anchor System
Regulation Number: 21 CFR 888.3040
Regulation Name: Smooth or threaded metallic bone fixation fastener
Regulatory Class: Class II
Product Code: MBI
Dated: August 22, 2013
Received: August 23, 2013

Dear Mr. Dhority:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you; however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set

forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm.

Sincerely yours,

Laurence D. Coyne -S

For Mark N. Melkerson
Director
Division of Orthopedic Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure

# Indications for Use

**510(k) Number (if known):** K132513

**Device Name:** Q-Fix™ Suture Anchor System

**Indications for Use:**

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| **Hip:** | Acetabular labral repair |

Prescription Use ___X___ (Part 21 CFR 801 Subpart D) AND/OR Over-The-Counter Use _____ (21 CFR 801 Subpart C)

**(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)**

Concurrence of CDRH, Office of Device Evaluation (ODE)

Casey L. Hanley, Ph.D.

Division of Orthopedic Devices